

WHAT IS CLAIMED IS:

1. A magnetic recording medium at least having a nonmagnetic layer and magnetic layer sequentially laminated on one surface of a nonmagnetic substrate,

wherein the magnetic layer contains a magnetic powder, a binder resin and an abrasive,

wherein an average height of protrusion of the abrasive from the surface of the magnetic layer measured using an AFM is in the range of 7.0 to 15.0 nm.

2. The magnetic recording medium according to Claim 1 used in a magnetic recording system comprising an MR head as a reproduction head.

3. The magnetic recording medium according to Claim 1, wherein the magnetic layer is formed by applying on the nonmagnetic layer by a wet-on-dry method.

4. The magnetic recording medium according to Claim 2, wherein the magnetic layer is formed by applying on the nonmagnetic layer by a wet-on-dry method.

5. The magnetic recording medium according to Claim 1, wherein the magnetic layer has an average surface roughness

Ra of not greater than 5 nm measured with an AFM.

6. The magnetic recording medium according to Claim 2, wherein the magnetic layer has an average surface roughness Ra of not greater than 5 nm measured with an AFM.

7. The magnetic recording medium according to Claim 3, wherein the magnetic layer has an average surface roughness Ra of not greater than 5 nm measured with an AFM.

8. The magnetic recording medium according to Claim 4, wherein the magnetic layer has an average surface roughness Ra of not greater than 5 nm measured with an AFM.

9. The magnetic recording medium according to Claim 2, wherein the track width of the MR head is 1-12 μm .

10. The magnetic recording medium according to Claim 2, wherein the tape speed of the magnetic recording system is 2-20 m/min.

11. The magnetic recording medium according to Claim 2, wherein the tape tension of the magnetic recording system is 0.4-2.0 N/10mm.